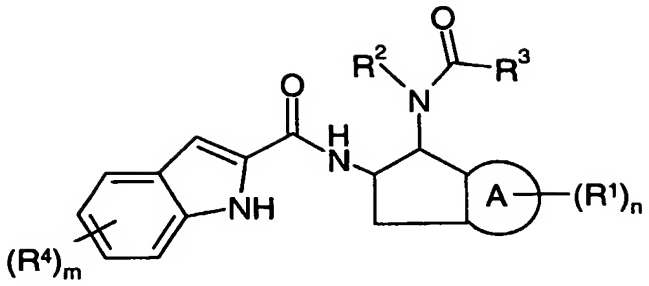
Claims

1. A compound of formula (1):



(1)

A is phenylene or heteroarylene;

n is 0, 1 or 2;

m is 0, 1 or 2;

R^1 is independently selected from halo, nitro, cyano, hydroxy, carboxy, carbamoyl, *N*-(1-4C)alkylcarbamoyl, *N*,*N*-((1-4C)alkyl)$_2$carbamoyl, sulphamoyl, *N*-(1-4C)alkylsulphamoyl, *N*,*N*-((1-4C)alkyl)$_2$sulphamoyl, -S(O)$_b$(1-4C)alkyl (wherein b is 0,1,or 2), -OS(O)$_2$(1-4C)alkyl, (1-4C)alkyl, (2-4C)alkenyl, (2-4C)alkynyl, (1-4C)alkoxy, (1-4C)alkanoyl, (1-4C)alkanoyloxy, hydroxy(1-4C)alkyl, fluoromethyl, difluoromethyl, trifluoromethyl, trifluoromethoxy and –NHSO$_2$(1-4C)alkyl;

or, when n is 2, the two R^1 groups, together with the carbon atoms of A to which they are attached, may form a 4 to 7 membered saturated ring, optionally containing 1 or 2 heteroatoms independently selected from O, S and N, and optionally being substituted by one or two methyl groups;

one of R^2 and R^3 is selected from R_Na, and the other is selected from R_Nb;

R_Na: (1-3C)alkyl, halo(1-3C)alkyl, dihalo(1-3)alkyl, trifluoromethyl, hydroxy(1-3C)alkyl, dihydroxy(2-3C)alkyl, cyano(1-3C)alkyl (optionally substituted on alkyl with hydroxy), methoxymethyl, ethoxymethyl, methoxyethyl, methoxymethoxymethyl, dimethoxyethyl, (hydroxy)(methoxy)ethyl, 5- and 6-membered acetals and mono- and di-methyl derivatives thereof, (amino)(hydroxy)(2-3C)alkyl, (aminocarbonyl)(hydroxy)(2-3C)alkyl, (methylaminocarbonyl)(hydroxy)(2-3C)alkyl, (dimethylaminocarbonyl)(hydroxy)(2-3C)alkyl, (methylcarbonylamino)(hydroxy)(2-3C)alkyl, (methylS(O)$_p$-)(hydroxy)(2-3C)alkyl (wherein p is 0, 1 or 2);

R_Nb: (1-4C)alkyl, halo(1-4C)alkyl, dihalo(1-4C)alkyl, trifluoromethyl, hydroxy(1-4C)alkyl, dihydroxy(2-4C)alkyl, trihydroxy(3-4C)alkyl, cyano(1-4C)alkyl (optionally substituted on alkyl with hydroxy), (1-4C)alkoxy(1-4C)alkyl, (1-4C)alkoxy(1-4C)alkoxy(1-4C)alkyl, di[(1-4C)alkoxy](2-4C)alkyl, (hydroxy)[(1-4C)alkoxy](2-4C)alkyl, 5- and 6-membered acetals and mono- and di-methyl derivatives thereof, (amino)(hydroxy)(2-4C)alkyl, (aminocarbonyl)(hydroxy)(2-4C)alkyl, ((1-4C)alkylaminocarbonyl)(hydroxy)(2-4C)alkyl, (di(1-4C)alkylaminocarbonyl)(hydroxy)(2-4C)alkyl, ((1-4C)alkylcarbonylamino)(hydroxy)(2-4C)alkyl, ((1-4C)alkyl$S(O)_p$-)(hydroxy)(2-4C)alkyl (wherein p is 0, 1 or 2);

wherein any alkyl or alkoxy group within any group in R_NA and R_NB may also optionally be substituted on an available carbon atom with a hydroxy group (provided that said carbon atom is not already substituted by a group linked by a heteroatom);

provided that if R^2 is (1-3C)alkyl or (1-4C)alkyl then R^3 is not (1-4C)alkyl or (1-3C)alkyl;

R^4 is independently selected from halo, nitro, hydroxy, fluoromethyl, difluoromethyl, trifluoromethyl, trifluoromethoxy, carboxy, carbamoyl, (1-4C)alkyl, (2-4C)alkenyl, (2-4C)alkynyl, (1-4C)alkoxy and (1-4C)alkanoyl;

or a pharmaceutically acceptable salt or pro-drug thereof.

2. A compound of formula (1) as claimed in Claim 1, or a pharmaceutically acceptable salt or pro-drug thereof, wherein R^2 is selected from R_Na, and R^3 is selected from R_Nb, wherein R_Na and R_Nb are as defined in Claim 1.

3. A compound of formula (1) as claimed in Claim 1 or Claim 2, or a pharmaceutically acceptable salt or pro-drug thereof, wherein A is phenylene.

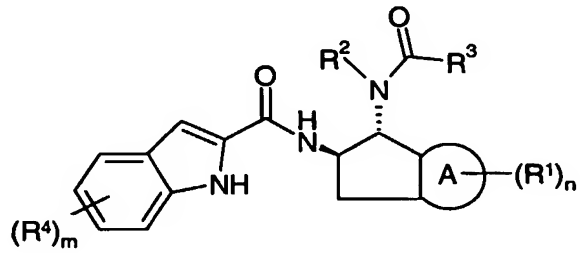
4. A compound of formula (1) as claimed in Claim 1, 2 or 3, or a pharmaceutically acceptable salt or pro-drug thereof, wherein n is 0.

5. A compound of formula (1) as claimed in any one of Claims 1 to 4, or a pharmaceutically acceptable salt or pro-drug thereof, wherein m is 0 or 1.

6. A compound of formula (1) as claimed in any one of Claims 1 to 5, or a pharmaceutically acceptable salt or pro-drug thereof, wherein R^4 is methyl, chloro or fluoro.

7. A compound of formula (1) as claimed in any one of Claims 1 to 6, or a pharmaceutically acceptable salt or pro-drug thereof, wherein R_Na is selected from (1-4C)alkyl, hydroxy(1-4C)alkyl, and (1-4C)alkoxy(1-4C)alkyl.

8. A compound of formula (1) as claimed in any one of Claims 1 to 7, or a pharmaceutically acceptable salt or pro-drug thereof, which is a compound of formula (1A):



(1A)

wherein R^1 to R^4, m and n are as defined in any one of claims 1 to 7.

9. A pro-drug of a compound of formula (1) as claimed in any one of Claims 1 to 8, which pro-drug is an in-vivo hydrolysable ester.

10. A pharmaceutical composition which comprises a compound of the formula (1), as claimed in claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, in association with a pharmaceutically-acceptable diluent or carrier.

11. A compound of the formula (1), as claimed in claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, for use in a method of treatment of a warm-blooded animal such as man by therapy.

12. A compound of the formula (1), as claimed in claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, for use as a medicament.

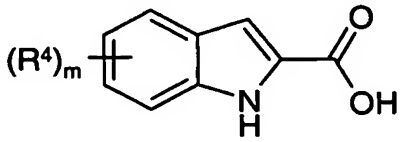
13. A compound of the formula (1), as claimed in claim 1, or a pharmaceutically acceptable salt or *in vivo* hydrolysable ester thereof, for use as a medicament in the treatment of type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia, hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded animal such as man.

14. The use of a compound of the formula (1), as claimed in claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, in the manufacture of a medicament for use in the treatment of type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia, hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded animal such as man.

15. The use of a compound of the formula (1), as claimed in claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, in the manufacture of a medicament for use in the treatment of type 2 diabetes in a warm-blooded animal such as man.

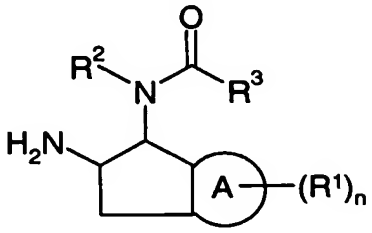
16. A process for the preparation of a compound of formula (1) as claimed in claim 1, which process comprises:

reacting an acid of the formula (2):



(2)

or an activated derivative thereof; with an amine of formula (3):



(3)

and thereafter if necessary:

i) converting a compound of the formula (1) into another compound of the formula (1);

ii) removing any protecting groups;

iii) forming a pharmaceutically acceptable salt or *in vivo* hydrolysable ester.